

**LESSON**  
**8.6****Practice C**

For use with pages 589–595

*find common denominators, rewriting  
and  
check for  
extraneous  
solutions!***Solve the equation by cross-multiplying. Check for extraneous solutions.**

1.  $\frac{x}{x-2} = \frac{2}{x+2}$

2.  $\frac{4}{x+5} = \frac{3}{x-2}$

3.  $\frac{x}{x-1} = \frac{x-4}{x+3}$

4.  $\frac{4x-3}{2x+2} = \frac{6x-3}{3x+5}$

5.  $\frac{x+7}{x-3} = 3$

6.  $\frac{x-1}{x+6} = \frac{x-1}{2x-1}$

**Solve the equation by using the LCD. Check for extraneous solutions.**

7.  $\frac{3}{x-3} + \frac{2}{x-5} = \frac{4}{x^2 - 8x + 15}$

8.  $\frac{4}{x+4} - \frac{1}{x-2} = \frac{12}{x^2 + 2x - 8}$

9.  $\frac{3}{x-1} + \frac{5}{x+1} = \frac{8x+5}{x^2-1}$

10.  $\frac{x^2}{x+3} + \frac{9(x-2)}{x+3} = 3$

11.  $\frac{2x}{3x-5} - \frac{x+1}{3x+5} = \frac{-4}{9x^2-25}$

12.  $\frac{x-3}{2x+1} + \frac{4x}{3x+5} = \frac{7x^2+12x-20}{6x^2+13x+5}$

**Solve the equation by using any method. Check for extraneous solutions.**

13.  $\frac{\frac{1}{x+1}}{\frac{1}{2} + \frac{x}{x+1}} = \frac{1}{5}$

14.  $\frac{\frac{4}{x-2} + 2}{\frac{6}{x} - \frac{3}{x-2}} = 12$

15. **Average Cost** You invest \$15,000 to start a hot dog stand at the local sports complex. It costs you \$.65 to produce each hot dog. How many hot dogs must you sell before your average cost per hot dog is \$1.15?

16. **Baseball** Halfway through the baseball season, a player has stolen 33 bases out of 42 tries. How many consecutive bases must the player successfully steal in order to raise his steal percentage to 85%?

**In Exercises 17 and 18, use the following information.**

**Fuel Efficiency** The cost of fueling your car for one year can be calculated using this equation: Fuel cost for one year =  $\frac{(\text{Miles driven} \times \text{Price per gallon})}{\text{Fuel efficiency rate}}$

17. Last year you drove 18,250 miles, paid \$2.30 per gallon of gasoline, and spent a total of \$1748.96 on gasoline. What is the fuel efficiency rate of your car?
18. How much would you have saved if you paid \$2.60 per gallon and your car's fuel efficiency rate were 42 miles per gallon?